

**DEPARTMENT OF ENERGY NATIONAL TRAINING CENTER  
2009 SECURITY PROTECTION OFFICER TEAM COMPETITION (SPOTC)  
RISK ANALYSIS REPORT**

<p>This document was reviewed and approved by the following NTC personnel:</p> <p>Charlie Carson, Preparer Mark Russell, Chief Range Officer Grady Smith, Range Master Randy Putt, PFTD Manager Debra Kirschner, ESH&amp;QA Director Jerry Harbour, Training Director Mark Jamsay, General Manager Cliff Gordon, DOE/NTC Reviewer Russ Showers, DOE/NTC Reviewer</p>	<p>Contractor Approval: <u>Mark Jamsay</u> Date: <u>05/28/09</u></p> <p>NTC Director Approval: <u>Arnold Guevara</u> Date: <u>05/28/09</u></p>
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Activity/Situation/Condition	Hazard Description	Recommended Control
I. General	Misunderstanding of SPOTC operational or safety procedures results in injury.	<p>All competition events will be conducted in accordance with DOE Manual 470.4-3A, <i>Contractor Protective Force</i>; HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>; PFT-SOP-644, <i>Live Fire Range Operations</i>; and the <i>2009 SPOTC Event Schedule, Program Guide, and Rule Book</i>.</p> <p>NTC Environment, Safety, Health &amp; Quality Assurance (ESHQA) staff will provide SPOTC participants with a general safety orientation prior to beginning of competition. SPOTC Range Officers (ROs) will conduct event-specific safety briefings prior to each competition event.</p>
	Injuries – general.	<p>First-aid kits are located at each range, and instructors are certified in first aid and cardiopulmonary resuscitation (CPR). Competitors are required to inform ROs of pre-existing medical conditions as well as over-the-counter and prescription medications prior to competition. A letter from the sending site stating that the competitor is medically fit to undergo training is required per 10 CFR 1046.19(b).</p> <p>ROs assess competitors prior to the day's activities. This assessment will involve the detection of obvious physical or emotional impairment (e.g., illness, hangover, alcohol odor, extreme fatigue, belligerence, or insubordination). Competitors deemed unfit for duty will be referred to the Team Captain and LFR management in all cases.</p> <p>At a minimum, one paramedic must be present during any hazardous training or operations or physical conditioning classes conducted by the NTC. If a paramedic is not readily available, per DOE M 470.4-3A, NTC firearms</p>

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		<p>instructors can take the place of the paramedic as they are trained and currently qualified in CPR/first aid and have specific training on the handling of gunshot wounds. The absence of a paramedic may be granted on a temporary basis with prior approval from the NTC Range Master, Protective Force Training Manager, and with notification to the NTC Environment, Safety, Health, and Quality Assurance (ESH&amp;QA) Director. (For more information, see SOP 644, LFR Operations.)</p> <p>Hazardous training and operations are those that involve any of the following: firearms; explosives; physical contact between students and/or staff; physical conditioning; night movements in a tactical setting; use of chemical agents; smoke grenades; tactical assault training; ESS weapons; obstacle courses; vehicle assault; training activities that involve the use of motor vehicles (tactical or defensive driving, motorcade, etc.); or any other type of training which by its inherent nature has a potential for injury.</p> <p>Range Officers must possess a hand-held radio capable of communicating with the paramedic on duty and LFR staff. If needed, the SNL Emergency Operations Center can be contacted by calling channel "EOC 1" on the radio. One RO must monitor Channel B4 for notification of non-NTC, offsite emergencies.</p> <p>SPOTC 2009 events have been evaluated by a certified Exercise Physiologist for their potential for altitude or heat-related illness or injury to team members.</p> <p>Team members will wear all personal protective equipment (PPE) required for competition events, to include:</p> <ul style="list-style-type: none"> <li>• Approved hearing and eye protection (mandatory)</li> <li>• Knee and elbow pads (mandatory)</li> <li>• Sturdy, non-slip footwear (mandatory)</li> </ul> <p>Protective masks will be worn by competitors during selected events at the direction of ROs.</p> <p>Team members will be required to wear brimmed caps, long sleeved shirts with sleeves rolled down and collar buttoned when engaging in shooting events.</p> <p>Persons supporting SPOTC events will receive a safety briefing prior to performing</p>

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		<p>their duties. It will include: job-specific PPE requirements; heat hazards and need for frequent fluid intake; recommendation to stay in shaded areas when possible; specific LFR safety requirements; requirements for safe use of support staff golf carts; safe lifting techniques for persons setting steel targets; and requirement to follow specific instructions of designated ROs (specifically with downrange activities).</p> <p>Informational signage is posted throughout the LFR to inform the public of general range safety requirements (e.g., eye and hearing protection requirements, pedestrian-restricted areas, parking areas, speed limits, etc.).</p> <p>Physical barriers, barrier tape, flags, or orange cones are used to identify areas where unauthorized personnel are not permitted during SPOTC. LFR staff and ROs ensure No-Go areas are enforced.</p> <p>Bleachers are emplaced in areas at each range from which it is safe for visitors to observe SPOTC activities. Bleachers will be located under cover when possible.</p> <p>Emergency drills are conducted annually to ensure proficiency of ROs, range staff, and medical support personnel.</p> <p>During live-fire events, any participant will call "CEASE FIRE" if they observe an unsafe act or condition. The event will not resume until the situation has been resolved.</p> <p>During any other activity, any participant will call "STOP WORK" if they observe an unsafe act or condition. The activity will not resume until the situation has been resolved.</p>
B. Weather/Environmental Conditions:	Adverse weather conditions affect team member's ability to safely complete competition events, resulting in injury.	<p>PFT-SOP-652, <i>Inclement Weather Training Restrictions</i>, provides guidelines for the delay or termination of competition events due to adverse weather.</p> <p>All team members are equipped with clothing and equipment appropriate to weather conditions. The LFR Safety Specialist monitors weather conditions.</p> <p>Continuation of competition events is based on Chief Range Officer (CRO) judgment of the severity of the weather and affect on team members, and guidelines found in PFT-SOP-652.</p>

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1. Hot weather	Heat-related injury: Heat stroke Heat exhaustion Heat cramps	<p>ROs are trained to recognize symptoms of heat illness/injury, and team members are briefed on recognition of heat injury symptoms and precautions to take. ROs will consult PFT-SOP-652, Appendix B, <i>National Weather Service Heat Index Chart</i>, Appendix C, <i>Heat Index/Heat Disorder Chart</i>, and Appendix D, <i>Thermal Stress</i>, for guidance.</p> <p>Paramedics are on site and trained and equipped to treat heat-related illnesses or injuries.</p> <p>Rest breaks are taken between events to allow team members to cool down and drink water or approved sports drinks. Drinking water and sports drinks are available at all event sites, and team members are encouraged to drink frequently. Rest breaks are taken in shaded areas when possible, and team members are encouraged to remove or loosen load-bearing equipment or any other restrictive clothing or equipment.</p> <p>All SPOTC events have been evaluated by a certified Exercise Physiologist to minimize the possibility of heat-related injury.</p>
2. Cold weather	Cold-related injury: Hypothermia Frostbite	<p>SPOTC is conducted when weather conditions are normally warm. In the unlikely event of cold weather, ROs are trained to recognize symptoms of cold-related injuries, and will brief team members on recognition of symptoms and precautions to take.</p> <p>The onsite paramedic is trained and equipped to treat all cold-related injuries.</p> <p>ROs will consult SOP 652, Appendix A, <i>National Weather Service Wind Chill Chart</i>, for guidance. Team members will be briefed on recognition of symptoms of frostbite and hypothermia and the precautions to take. Rest breaks will be taken frequently in heated areas to allow team members to warm up and drink fluids.</p>
3. Rain	Wet competition surfaces cause slips and falls, resulting in injury	<p>ROs inspect competition event areas prior to the beginning of events. If hazards exist due to wet surfaces, events are delayed or re-scheduled.</p> <p>Team members and event volunteers are required to wear sturdy, slip-resistant footwear.</p>

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	Inability of team members to see targets results in injury.	Delay or termination of competition events is based on CRO assessment of conditions and criteria found in PFT-SOP-652.
4. Lightning	Electrocution due to lightning strike.	ROs will terminate competition events if portable lightning detectors indicate a lightning strike within 3 miles of competition sites. Team members, ROs, volunteers, and observers will be moved under shelter or indoors until the threat of lightning has passed. Guidelines for terminating outdoor activities due to lightning are found in PFT-SOP-652.
5. High Wind	Team members fire at targets moved by wind gusts, and bullets impact outside of an approved impact area or surface danger zone (SDZ).	ROs will consult PFT SOP 652 for guidance if high winds occur prior to, or during, competition events. Termination of competition events, or use of alternate target systems, will be based on CRO assessment of conditions and guidelines found in PFT-SOP-652.  Shooting events on open ranges will be terminated when sustained winds of 30 mph or higher are recorded.
	Blowing debris, sand, or dirt distracts participants or causes eye injuries.	Protective eyewear meeting requirements of ANSI Standard Z87.1-2003 is required of all team members and ROs. Side shields will be worn. Safety glasses are available at each range for volunteers and observers.
	Inability of team members to hear event commands due to wind noise results in injury.	ROs will utilize range public address systems or portable public address systems.
6. Ultraviolet rays	Sunburn	Team members, ROs, volunteers, and observers are encouraged to use sun block (lotion) with a minimum SPF 15, wear headgear that affords head and neck protection, and wear long-sleeve shirts with sleeves rolled down. This information is included in the safety briefings, and sun block is available to all individuals at the LFR.
7. Fires	Fire at LFR caused by lightning or smoking	ESH-GP-525, <i>Fire Protection Program</i> , provides guidelines for NTC response to fires. Annual fire drills are conducted at the LFR.  Smoking is not permitted at the LFR or in any government-owned or leased vehicle while on the limits of the LFR.  Emergency telephones and hand-held radios are located at each competition range,

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		<p>and emergency instructions are posted at each telephone.</p> <p>Dry chemical wall-mounted fire extinguishers are located at the following LFR buildings/facilities:</p> <ul style="list-style-type: none"> <li>• Building 100, Live Fire Range Administration</li> <li>• Building 101, Classroom F</li> <li>• Building 102, Live Fire Range Maintenance</li> <li>• Building 105, Control Tower, Pistol Range 1</li> <li>• Building 107, Live Fire Range Armory</li> <li>• Building 110, Control Tower, Rifle Range 1</li> <li>• Building 114, Live Fire Shoot House</li> <li>• Building 115, Multi Purpose Range Classroom</li> <li>• LFR Ammunition Storage Area</li> </ul>
<b>C. Physical Conditions</b>		
<p>1. Competition event surfaces</p> <ul style="list-style-type: none"> <li>• Firing ranges</li> <li>• Natural terrain course</li> <li>• Walking or running surfaces</li> <li>• Confined spaces</li> <li>• Rooftops</li> </ul>	Slipping/tripping hazards result in injuries from slips, trips, and falls while walking or running competition events.	<p>Competition event surfaces are maintained in a safe condition.</p> <p>Competition event surfaces are surveyed prior to competition events. Hazards are identified and/or removed from the competition area.</p> <p>Competition events are conducted on paved surfaces and established roadways or walkways, where possible.</p> <p>Brass and hardware (speed loaders, magazines) are picked up after each course of fire.</p>
	Team member injured in confined space.	No SPOTC event sites include areas that meet the 29 CFR 1910.146 definition of a permit-required confined space (e.g., a confined space where a team member may become trapped and succumb to a lack of oxygen or a buildup of toxic gases).
	Team member injured when falling from rooftop.	No SPOTC events involve training on rooftops.

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2. Flying objects or debris <ul style="list-style-type: none"> <li>Exhaust gases from firearms</li> <li>Bullet fragments from steel targets</li> <li>Blowing dirt or debris</li> </ul>	Injury to eyes and/or distraction to team members and observers results in injury.	<p>Prior to entering firing range competition areas, all team members, volunteers and observers are required to wear eye protection that complies with ANSI Standard Z87.1-2003. Side shields or wraparound glasses are required for shooters and ROs.</p> <p><b>Exception:</b> If team members are required to wear protective masks during a competition event that requires shooting, the protective mask will serve as eye protection.</p> <p>Hats with brims are required when shooting steel targets.</p> <p><b>Exception:</b> If team members are required to wear protective masks during a competition event that involves shooting, a hat will not be required.</p> <p>Use of non-lead, frangible ammunition reduces the possibility of ricochet or bullet fragments.</p>
3. Noise from discharge of firearms or detonation of pyrotechnic or explosive devices	Damage to hearing of team member, RO, or observer	<p>Prior to entering firing range competition areas, team members, ROs, volunteers, and observers will wear hearing protection with a minimum noise reduction rating (NRR) of 26.</p> <p>29 CFR 1910.95 requires DOE and non-DOE team members to be enrolled in approved hearing conservation programs that monitor the effect of occupational exposure to noise on their hearing. Guidance for NTC employees is found in ESH-GP-519, <i>Hearing Conservation Program</i>.</p> <p>Canadian team members are subject to Canadian government hearing conservation and testing program requirements.</p>
4. Exposure to lead dust, lead particles, vapor, or other airborne contaminants from the use of ammunition with lead-based primers <ul style="list-style-type: none"> <li>Airborne lead</li> <li>Surface lead contamination on firearms, in cleaning room, or on expended brass</li> </ul>	Exposure of team members and ROs to airborne and surface lead contaminants results in exposure through inhalation, ingestion, or absorption.	<p>Smoking and eating are prohibited while on LFR ranges. In safety briefings, competition participants are reminded to practice good personal hygiene.</p> <p>Use of non-lead, frangible ammunition reduces participant exposure to lead.</p> <p>Airborne and surface lead concentrations at NTC ranges are measured periodically to ensure that exposure to lead is not above the established action level or permissible exposure limit.</p> <p>29 CFR 1910.1025 requires DOE team members to be enrolled in approved lead testing programs that regularly monitor their occupational exposure to lead. Guidance for NTC employees is found in ESH-GP-521, <i>Lead Monitoring Program</i>.</p>

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		Canadian team members are subject to Canadian government lead monitoring and testing program requirements.
5. Cleaning room solvents and lubricants	Injury to eyes	Eye protection must be worn in weapons cleaning rooms and must conform to requirements of ANSI Standard Z87.1-2003.  Emergency eyewash stations are located in cleaning rooms.
	Irritation to exposed skin	Gloves and/or hand barrier cream is provided in weapons cleaning rooms.  Material Safety Data Sheets (MSDS) for solvents/lubricants are located in cleaning rooms.
	Respiratory irritation	Weapons cleaning areas are well ventilated.
6. Facade and barricade structural stability	Injury results from deterioration of structural material	Range maintenance personnel inspect facades and barricades prior to competition to ensure structural integrity. Damaged facades or barricades are repaired or removed prior to use. ROs inspect facades and barricades immediately prior to competition events to ensure structural integrity.
<ul style="list-style-type: none"> <li>Ballistic characteristics</li> </ul>	Discharge of weapon with muzzle behind façade or barricade results in ricochet and injury.	RO proximity to team members allows close control of team member's muzzle, and immediate response to an unsafe condition. RO may stop competition event at any time to prevent injury.
<ul style="list-style-type: none"> <li>Erecting and moving facades and barricades</li> </ul>	Hands are injured by cuts, splinters, or scrapes when erecting or moving facades or barricades.	Gloves are available to range personnel who erect or move facades and barricades.
7. Natural terrain areas		
<ul style="list-style-type: none"> <li>Walking and running surfaces</li> </ul>	Slipping/tripping hazards result in injuries from slips, trips, or falls.	Team members are provided with safety briefings by ROs prior to each competition event. The briefing identifies event boundaries and hazards.
<ul style="list-style-type: none"> <li>Natural hazards</li> </ul>	Team member receives injury from cacti, snakes, or other elements associated with the natural environment.	ROs inspect courses prior to competition events to identify, mark, or remove hazards. Team members are briefed on potential natural hazards.  Paramedics are on site during competition events. ROs are certified in first aid and CPR.

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II. Firearms – General		
A. Any Activity Involving Firearms	Injuries - General	<p>All firearms-related competition events will comply with requirements of DOE Manual 470.4-3A, <i>Contractor Protective Force</i>; HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>; PFT-SOP-644, <i>Live Fire Range Operations</i>; and the 2009 SPOTC Event Schedule, Program Guide, and Rule Book.</p> <p>Competition participants must be physically and medically fit to undergo the rigors of SPOTC competition events. Sending sites will confirm their team member's medical fitness to participate prior to their arrival at the NTC.</p> <p>Use of non-lead, frangible ammunition during competition events reduces possibility of ricochets and back-splatter.</p>
	Intentional or unintentional shooting results in injury.	<p>ROs are NTC-certified firearms instructors, and are taught to recognize potential behavioral problems. ROs assess all team members prior to competition events. Team members deemed unfit for duty will be referred to their Team Captains, the CRO and/or a paramedic immediately.</p> <p>All SPOTC event participants are briefed that they will call "CEASE FIRE" or "STOP WORK" if they observe an unsafe act during competition events. ROs will stop the event until the situation is safely resolved.</p>
	Unauthorized discharge results in injury.	<p>All firearms competition events are conducted at the NTC LFR, which operates under approval of the DOE Office of Health, Safety and Security (HSS). This approval is based on the current approved Safety Assessment Report (SAR) for the NTC LFR.</p> <p>Competition participants must have completed basic firearms safety training before they are allowed to participate in firearms competition events.</p> <p>ROs and safety officers ensure that range safety rules are followed. Any person at the LFR will call "CEASE FIRE" or "STOP WORK" if they observe an unsafe act. ROs will stop the event until the situation is safely resolved.</p> <p>An approved risk analysis report for SPOTC events is required prior to the competition.</p> <p>ROs responsible for firearms-related competition events must be NTC-certified Firearms Instructors.</p>

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		<p>Firearms-related SPOTC events must:</p> <ul style="list-style-type: none"> <li>• Be conducted in accordance with approved competition event plans and SOPs.</li> <li>• Employ Instructor-to-student ratios required by DOE Manual 470.4-3A, <i>Contractor Protective Force</i>.</li> </ul> <p><b>NOTE:</b> To maintain a safe competition environment, ROs may increase RO-to-Team member ratios based on an evaluation of team member's physical ability, skill level, weapon manipulation skills, or adherence to safety rules.</p> <p>All firearms-related SPOTC events will be conducted in accordance with the Four General Firearms Safety Rules:</p> <ul style="list-style-type: none"> <li>• All firearms are always loaded.</li> <li>• Never let the muzzle cover anything you are not willing to destroy.</li> <li>• Keep your finger off the trigger until you are on target.</li> <li>• Be sure of your target.</li> </ul> <p>All weapons will be holstered, slung, in the low ready, in an approved carry, or on target during firearms competition events. Holster retention straps will be secured.</p> <p>RO proximity to team members allows ability to rapidly respond to potentially unsafe conditions. RO will stop competition events at any time to prevent injury.</p> <p>Violation of any of the Four General Firearms Safety Rules, or disregard for competition safety requirements, will be grounds for removal from the competition.</p> <p>LFR berms are angled and covered with rock free soil to minimize the possibility of ricochets traveling up range. Hard surfaces down range are minimized or guarded by berms and are generally limited to flat concrete firing lines.</p> <p>Ricochets from rounds striking the firing lines would travel down range and impact in approved berms or impact areas. Use of non-lead, frangible ammunition for competition events reduces the possibility of ricochets. ROs and safety officers control team members to prevent movement beyond a firing line.</p>
1. Vendor Demonstrations	Injury results from vendor demonstration firing.	Vendors conducting demonstration firing will be under the control and supervision of an RO at all times. Vendors will comply with all live-fire requirements of PFT-SOP-644 when conducting demonstration firing.

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		Vendors will be provided with a safety briefing by an RO prior to performing live-fire activities.
	Injury results when conducting vendor demonstration firing at steel targets.	<p>During the vendor demonstrations, only approved shooters (e.g., team members, NTC staff, or DOE personnel) will be permitted to fire. Targets will be:</p> <ol style="list-style-type: none"> <li>1. Located on an approved range;</li> <li>2. Mounted on approved stand, with bases of metal stands sandbagged;</li> <li>3. Positioned at approved distances;</li> <li>4. Fired at only with approved weapons firing approved ammunition.</li> </ol> <p>Range maintenance personnel regularly inspect and maintain reactive, moving, and steel target systems. ROs inspect reactive, moving, and steel targets prior to use. Inspection, placement, and engagement of steel targets will comply with requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Bases of metal targets will be sandbagged. Any steel target in question will not be used.</p>
<b>B. Equipment and Firearms</b>		
<b>1. Equipment selection</b>		
<ul style="list-style-type: none"> <li>Firearms</li> </ul>	Firearms fail or malfunction, causing injury.	DOE HSS must approve all DOE-owned firearms used during SPOTC. Team member-provided firearms must be of sufficient quality to safely withstand the rigors of SPOTC firearms competition events. All team member weapons must be approved duty firearms from their parent agency.
<ul style="list-style-type: none"> <li>Ammunition</li> </ul>	Ammunition fails or malfunctions, causing injury.	Only ammunition of the highest quality and approved by DOE HSS will be used for live-fire competition events.
<ul style="list-style-type: none"> <li>Competition equipment</li> </ul>	Competition equipment fails or malfunctions, causing injury.	Competition equipment must provide participants with the ability to move in a safe, sound, and timely manner under all expected competition event conditions.
<ul style="list-style-type: none"> <li>Protective masks</li> </ul>	Protective mask fails to afford protection, resulting in irritation or injury.	Team members arrive at SPOTC with the training and ability to properly inspect, clean, don, wear and remove a protective mask during competition events.

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C. Equipment Inspection		
<ul style="list-style-type: none"> <li>Firearms</li> </ul>	Firearms fail or malfunction, causing injury.	Certified NTC gunsmiths will inspect and certify all DOE firearms issued and used during competition events. NTC gunsmiths will inspect all weapons brought by team members for use in competition events.
<ul style="list-style-type: none"> <li>Ammunition</li> </ul>	Ammunition fails or malfunctions, causing injury.	ROs will inspect competition ammunition at time of issue. Damaged or suspect ammunition will be taken out of service and properly disposed of. Ammunition that is dropped will be inspected for damage by an RO prior to use. ROs ensure that only approved ammunition is issued and used in competition events.
<ul style="list-style-type: none"> <li>Competition Equipment</li> </ul>	Competition equipment fails or malfunctions, causing injury.	Team members will inspect holsters, load bearing equipment, protective masks, and magazine pouches for proper stitching and serviceable metal, plastic, and VELCRO fasteners. Defective equipment will not be used.
<ul style="list-style-type: none"> <li>Protective Masks</li> </ul>	Protective mask is unhygienic or malfunctions, resulting in irritation or injury.	Team members inspect, clean, decontaminate, and fit test protective masks prior to competition use.
D. Firearms Manipulation	Unsafe act results in injury.	ROs closely supervise team members during firearms manipulation.  Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe act. ROs will stop the event until the situation is safely resolved.
<ul style="list-style-type: none"> <li>Loading and unloading of competition weapons</li> </ul>	Unauthorized discharge results in injury.	ROs closely supervise loading and unloading of competition weapons.  Weapons are pointed safely down range or into a bullet containment device at all times, and team members are briefed to keep their fingers straight along the frame of the weapon while loading/unloading.  After a competition event, ROs verify that all firearms are safe and clear, and in an approved carry position prior to a team member departing a firing line. Team members are advised to clear their weapons in a bullet containment device prior to entry into a weapons cleaning room. ROs verify weapons are clear, and no live ammunition is taken into a cleaning room.

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	Team members sustain minor hand injuries while assembling, disassembling, manipulating, or cleaning weapons.	Team members are trained in proper firearms assembly, disassembly, manipulation, and cleaning skills.
	Open breech detonation results in injury.	Team members are trained in proper manipulation, loading, and unloading techniques for weapons in use. RO proximity to team members ensures ability to rapidly respond to unsafe conditions.
	Loose ammunition detonation results in injury.	Unloaded ammunition is returned to manufacturer's packaging, or the equivalent. Ammunition will not be taken out of boxes and placed in bulk containers.
<ul style="list-style-type: none"> <li>Presentation of handgun</li> </ul>	Finger on trigger results in unauthorized discharge and injury.	<p>All activities are conducted in accordance with the Four General Firearms Safety Rules:</p> <ul style="list-style-type: none"> <li>All firearms are always loaded.</li> <li>Never let the muzzle cover anything you are not willing to destroy.</li> <li>Keep your finger off the trigger until your sights are on target.</li> <li>Be sure of your target.</li> </ul> <p>Team Captains and ROs ensure team member's fingers are not on triggers until handguns are on target.</p>
	Team member misses target, resulting in bullet impact outside of an approved impact area or SDZ.	Firearms are always pointed down range so discharged rounds will safely impact in an approved impact area. Range limitation poles are in place at each range. All targets are placed within approved range fans of fire so that projectiles impact within an approved SDZ.
<ul style="list-style-type: none"> <li>Holstering handgun</li> </ul>	Unsafe holstering results in injury if the handgun discharges.	ROs closely supervise team member's holstering movements and ensure the trigger fingers are not in the trigger well.
	Holstering without de-cocking, or placing weapon on SAFE, results in weapon discharge, and injury.	Team members come to low ready position and de-cock, or place weapon on SAFE, prior to holstering. ROs ensure weapons are de-cocked or on SAFE, holstered, and retention straps are secured.
E. Shooting at single, fixed, non-reactive, paper, or cardboard targets	Unsafe acts result in injury.	<p>RO proximity to team member permits ability to rapidly respond to an unsafe condition.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe act. ROs will stop the event until the situation is safely resolved.</p>

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<ul style="list-style-type: none"> <li>Proximity to other team members</li> </ul>	Team member hit with hot brass ejected from nearby weapon, and receives minor burns.	Brimmed hats, safety glasses, and long sleeves rolled down with cuffs and collar buttoned are required during competition shooting.
	Team member hit with hot brass reacts in unsafe manner, resulting in injury.	<p>Spacing between team members at team shooting positions is considered during the design and validation of each course of fire to ensure team members are spaced far enough apart to minimize likelihood of being hit by ejected round.</p> <p>Brass deflectors are mounted on weapons of left-hand team members (where possible.)</p> <p>Team members are trained to holster, or ground, a safe weapon, or to keep weapon pointed safely down range, if hit by hot brass.</p>
<ul style="list-style-type: none"> <li>Assuming different firing positions</li> </ul>	Assuming the squatting, kneeling, or prone position results in injury.	Team members are cautioned to keep the firing line clear of stones, brass, or hardware, such as speed loaders and magazines. Knee and elbow pads are mandatory during SPOTC events. Pistols will NOT be drawn or holstered when team members are in the kneeling, squatting, or prone positions.
<ul style="list-style-type: none"> <li>Shooting from a barricade or facade</li> </ul>	Weapon muzzle behind barricade or façade causes flying debris, resulting in injury.	Team members receive safety briefing from RO prior to start of competition events involving firing from behind barricades or facades. RO proximity to team member permits ability to respond rapidly to unsafe conditions. RO will stop firing at any time to prevent injury. Team members and ROs wear approved eye protection.
F. Firearm or Ammunition Malfunction	Unsafe act results in injury.	<p>ROs closely supervise team members during competition firearms events.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe act. ROs will stop the event until the situation is safely resolved.</p>
<ul style="list-style-type: none"> <li>Firearm malfunction clearance</li> </ul>	Finger on trigger results in unauthorized discharge resulting in injury if muzzle is not pointed safely down range.	<p>Close supervision by RO ensure that:</p> <ul style="list-style-type: none"> <li>Fingers are kept off trigger until sights are on target.</li> <li>Muzzle is not allowed to cover unintended targets.</li> <li>Muzzles are always pointed safely down range.</li> </ul>

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Activity/Situation/Condition	Hazard Description	Recommended Control
<ul style="list-style-type: none"> <li>Ammunition malfunction</li> </ul>	<p>Squib round projectile lodged in barrel causes barrel to rupture if next round is fired, resulting in injury.</p>	<p>Only new ammunition from reputable manufactures that is approved by DOE HSS is used during competition events.</p> <p>Team members are trained to perform routine clearing of their weapons and to recognize and clear routine malfunctions. Team members are trained to immediately stop shooting in the event of a squib round and to keep their weapon pointed safely down range.</p>
<p>G. Competition activities utilizing multiple, moving, reactive, and/or steel targets</p>	<p>Unsafe act results in injury.</p>	<p>ROs closely supervise team members during competition firearms events.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe act. ROs will stop the event until the situation is safely resolved.</p>
<ul style="list-style-type: none"> <li>Target systems</li> </ul>	<p>Injury results from ricochet from improperly inspected, maintained, or emplaced, target system.</p>	<p>Range maintenance personnel regularly inspect and maintain reactive, moving, and steel target systems. ROs inspect reactive, moving, and steel targets prior to event competition. Inspection, placement, and engagement of steel targets will comply with requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Any steel target in question will not be used.</p> <p>Use of non-lead, frangible ammunition during competition events reduces possibility of ricochets and splatter. Bases of steel targets are sandbagged.</p>
<ul style="list-style-type: none"> <li>Shooting involving movement</li> </ul>	<p>Team member falls during movement and discharges weapon, resulting in injury</p>	<p>ROs inspect area over which team members will engage in shooting and moving, and identify, mark, or remove hazards. Team members are briefed on known hazards prior to beginning event. RO proximity to team member allows ability to respond rapidly to unsafe conditions.</p> <p>Any SPOTC participant will call "CEASE FIRE" if an unsafe condition is observed. ROs will stop the event until the situation is safely resolved.</p> <p>Instructor-to-student ratios required by DOE Manual 470.4-3A will be maintained during competition shooting events involving movement of the shooter.</p>

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	<p>Team member moves forward of other team members or ROs, and is covered by loaded weapons of other team members,</p> <p style="text-align: center;"><b>OR</b></p> <p>Team member stops during move and covers other team members, or ROs, on either side.</p>	<p>RO proximity to team members enhances ability to safely control their movement and rapidly respond to unsafe conditions.</p> <p>Event areas are inspected by ROs prior to competition and cleared of obstacles that may contribute to uneven movement of team members.</p> <p>Any SPOTC participant will call "CEASE FIRE" if an unsafe condition is observed. ROs will stop the event until the situation is safely resolved.</p> <p>Instructor-to-student ratios required by DOE Manual 470.4-3A will be maintained during competition shooting events involving movement of the shooter.</p>
<ul style="list-style-type: none"> <li>Competition events requiring wear of protective masks</li> </ul>	Protective mask fogs up, resulting in team member tripping, falling, or accidentally discharging a weapon.	<p>Team members belong to the sending site Respirator Program, and have received training in inspection, cleaning, fit testing, and wear of protective masks, and have met medical requirements of 29 CFR 1910.134 prior to arrival at competition.</p> <p>Any team member will call "CEASE FIRE" if unsafe conditions develop. ROs will stop the event until the situation is safely resolved.</p>
	Heat injury or dehydration as a result of protective mask wear.	<p>ROs closely monitor team members for signs of heat injury or dehydration.</p> <p>A competition paramedic will be called immediately to examine suspected heat injury victims.</p>
<b>III. Competition Events</b>		
A. Competition Events -General	Physical injuries.	<p>ROs will inspect and remove hazards prior to beginning of competition events, and will identify other known hazards to team members prior to starting an event. Team members will be informed of event boundaries and advised to stay within the boundaries.</p> <p>A paramedic is on station during competition events.</p> <p>Any SPOTC participant will call "CEASE FIRE" if an unsafe condition is observed. ROs will stop the event until the situation is safely resolved.</p> <p>If events require team members to engage in heavy lifting, ROs or Team Captains will brief them on proper lifting techniques. Potential lifts have been appropriately designed to not over tax team members.</p>

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		<p>Close RO supervision of, and proximity to, team members ensures rapid response to unsafe conditions.</p> <p>Three-man team events have been adjusted so that team members can safely perform required event activities, and to accommodate the shorter range of handguns.</p>
<ul style="list-style-type: none"> <li>Lack of Preparation</li> </ul>	Inadequate physical condition of team members results in injury.	Team members should arrive at SPOTC in good physical condition and have the ability to undergo the physical demands of the competition. Sending sites will verify in advance their team members' ability to undergo the physical stress of SPOTC events.
	Inadequate warm up or stretching prior to competition events, or inadequate cool down period after events, results in injury.	Team Captains ensure adequate pre-event warm up and stretching exercises, and sufficient cool down period after events have ended. Team Captains and team members are briefed to advise ROs of any illness or injury sustained during the competition. Ill or injured team members will be immediately referred to the onsite paramedic for evaluation and treatment.
<ul style="list-style-type: none"> <li>Team runs</li> </ul>	Team member becomes ill or injured while running.	Team members should arrive at SPOTC in good physical condition. Team Captains ensure adequate warm up and stretching prior to team runs. ROs closely monitor team members during runs for signs of exhaustion or dehydration. Ill or injured team members are referred to an onsite paramedic for evaluation and treatment.
<ul style="list-style-type: none"> <li>Effects of high altitude on team members</li> </ul>	Team members experience fatigue, dehydration, dizziness, nausea, or exhaustion during competition events.	<p>ROs brief team members on potential effects of strenuous activities at high altitudes.</p> <p>A paramedic is on station during all competition events.</p> <p>Team members are provided breaks in shaded areas to rest and drink liquids.</p> <p>Team Captains and ROs continually monitor each team member's physical condition, and will immediately refer any team member who appears ill to the paramedic.</p>
<ul style="list-style-type: none"> <li>Team member movement with weapons</li> </ul>	Team member accidentally fires weapon while moving in competition event, resulting in injury.	<p>Team members will be reminded of the Four General Firearms Safety Rules.</p> <p>RO proximity to team members during competition events will allow rapid response to unsafe conditions. Instructor-to-Shooter ratios required by DOE Manual 470.4-3A will be observed during all shooting events that require movement.</p>

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		<p>A paramedic is on station during all competition events.</p> <p>When moving between competition events (stations), all weapons will be unloaded, placed on SAFE or de-cocked, and holstered or slung. Holster retention straps will be secured. Prior to movement to next event, ROs will verify the condition of each team member's weapon.</p> <p>If an event requires movement with a loaded weapon, team members will follow procedures prescribed for specific events as briefed by their ROs. Team member movement will be carefully monitored by ROs.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe act. ROs will stop the event until the situation is safely resolved.</p>
	<p>Team member moves in front of, or lags behind, the line of shooters and covers other team members, ROs, or observers with their weapons.</p>	<p>Team members are briefed on procedures for negotiating competition events prior to the start of each event. ROs clear event area of obstacles that may impede movement prior to beginning. RO proximity to team members allows rapid response to unsafe conditions.</p> <p>Proper instructor-to-shooter ratios ensure control of team member movement.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition. ROs will stop the event until the situation is safely resolved.</p>
<ul style="list-style-type: none"> <li>Competition Surfaces</li> </ul>	<p>Slipping/tripping hazards result in injuries.</p>	<p>Team members are provided a safety briefing prior to each competition event that identifies event boundaries and hazards associated with the event. Competition event surfaces are inspected by ROs prior to each event, and slipping or tripping hazards are identified, marked, and/or removed.</p> <p>A paramedic is on station during all competition events.</p>
<ul style="list-style-type: none"> <li>Physical Hazards</li> </ul>	<p>Injury resulting from falling, crawling, climbing, lifting, pulling, or jumping.</p>	<p>Pre-event safety briefing and close RO supervision of team members reduces chances of injury. Use of approved hearing/eye protection, knee pads, and elbow pads by team members during competition events will be mandatory. Glove wear by team members is optional. Padding or protective covers on event obstacle surfaces reduces chance of injury.</p> <p>If events require team members to engage in heavy lifting, ROs or Team Captains will brief them on proper lifting techniques.</p>

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		<p>Course obstacles have been evaluated for injury potential and adjusted as necessary.</p> <p>A paramedic is on station during all competition events.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition. ROs will stop the event until the situation is safely resolved.</p>
B. Evacuation of injured persons	Injuries – general.	<p>An annual LFR emergency exercise is conducted to ensure NTC staff can effectively secure, and expedite, a successful evacuation of a casualty from the LFR.</p> <p>Selected NTC staff members who may assist in helicopter evacuation of an injured person have completed the Ground School offered by Petroleum Helicopters International.</p>
1. Medical evacuation helicopter: Designated landing zone preparation	Injuries due to improper preparation of landing zone.	<p>The helicopter landing zone (LZ) must be:</p> <ul style="list-style-type: none"> <li>• Level (not to exceed 5 degree slope)</li> <li>• Free of loose debris</li> <li>• Clear of wires, trees, fences, vehicles, bushes, telephone poles</li> <li>• 100 feet x 100 feet (day or night)</li> <li>• 100 feet to 200 feet down-wind of the patient care area</li> <li>• Clear of personnel and vehicles for at least 200 feet.</li> </ul> <p>The designated primary LZ at the LFR is at the 200-yard line on Rifle Range 1. Pilot may use discretion if a suitable LZ is nearer to the person to be evacuated.</p> <p>The designated LZ Commander (Range Master or designee) will ensure access to the LZ is tightly controlled.</p> <p>The Range Master will ensure all active ranges are shut down prior to arrival of the helicopter.</p>
2. Medical evacuation helicopter: Pilot-discretion landing zone	Injuries during landing at pilot-discretion landing zone.	<p>A pilot-discretion LZ should be:</p> <ul style="list-style-type: none"> <li>• Level (not to exceed 5 degree slope)</li> <li>• Free of loose debris</li> <li>• Clear of wires, trees, fences, vehicles, bushes, telephone poles</li> <li>• 100 feet x 100 feet (day or night)</li> <li>• 100 feet to 200 feet down-wind of the patient care area (may be closer based on</li> </ul>

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		<p>pilot assessment of situation)</p> <ul style="list-style-type: none"> <li>• Clear of personnel and vehicles for at least 200 feet (may be closer based on pilot assessment of situation)</li> </ul> <p>The designated LZ Commander (Range Master or designee) will ensure access to the pilot-discretion LZ is tightly controlled. Every effort will be made to remove loose debris in the LZ, if possible, prior to landing.</p> <p>The Range Master will ensure all active ranges are shut down prior to arrival of the helicopter.</p>
3. Medical evacuation helicopter final approach before landing at the LFR	Injuries during final approach of medical evacuation helicopter to the LFR.	<p>A designated NTC instructor will establish radio contact with pilot on approved Med Channel during final approach. He will advise the pilot of:</p> <ul style="list-style-type: none"> <li>• LZ location</li> <li>• Wind speed and direction</li> <li>• Potential obstacles</li> <li>• Condition of LZ surface</li> <li>• Security condition of LZ</li> <li>• Patient information (if available from paramedics),</li> <li>• White smoke grenade will signal LZ (optional)</li> </ul> <p>The instructor will remain in radio contact until the aircraft has landed.</p> <p>The LZ Commander will be responsible for directing the helicopter to the LZ. At night, the LZ Commander will ensure that no lights are shined into the pilot's eyes. The LZ Commander will wear a brightly-colored reflective vest and eye and hearing protection. He will stand at the LZ and direct the helicopter to the LZ with hand and arm signals. LZ Commander will ensure aircraft is directed to land with the <u>nose into the wind</u>.</p>
4. Medical evacuation helicopter on the ground	Person injured while in proximity to medical evacuation helicopter while on ground.	<p>The LZ Commander will appoint an LZ Guard to ensure no one approaches the tail rotor of the aircraft. The LZ Guard will wear eye and hearing protection.</p> <p>Persons approaching the helicopter must:</p> <ul style="list-style-type: none"> <li>• Wear eye and hearing protection</li> <li>• Not raise hands or objects over head while rotor is turning</li> <li>• Make eye contact with pilot, do not approach until signaled</li> <li>• Always approach from the front of the aircraft, never the rear</li> </ul>

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		<ul style="list-style-type: none"> <li>• Not attempt to open aircraft doors</li> <li>• Follow all directions of the flight crew.</li> </ul> <p>The flight crew will designate ground personnel to assist them with loading of a patient. Patients are always loaded from the 9 o'clock position.</p>
5. Medical evacuation helicopter departs LFR	Person injured during or after departure of the aircraft.	<p>All personnel will stand at least 100 feet from the departing aircraft.</p> <p>Radio contact will be maintained with the helicopter for at least 2 minutes after lift-off in the event the aircraft must return. Vehicles and personnel will stay off the LZ until the 2 minutes has expired.</p>
C. Competition Team Events	Team members receive injuries when shooting, or while negotiating individual or team events.	<p>All shooting events will be governed by requirements of DOE Manual 470.4-3A, <i>Contractor Protective Force</i>; HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>; PFT-SOP-644, <i>Live Fire Range Operation</i>; and the 2009 SPOTC <i>Events Schedule, Program Guide, and Rule Book</i>. ROs will strictly enforce the Four General Firearms Safety Rules at all times during the competition.</p> <p>Team members wear PPE appropriate to event hazards (e.g., approved hearing and eye protection, knee and elbow pads, sturdy, non-slip footwear. Gloves are optional).</p> <p>ROs brief team members on hazards of obstacles prior to beginning each event, and ROs closely supervise team members while they negotiate event obstacles. A paramedic is on station during all competition events.</p> <p>Firing distances for three-man team events involving handguns-only have been adjusted to account for the more limited range of handguns. Other adjustments have been made in three-man team events to accommodate the lesser number of team members.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition. ROs will stop the event until the situation is safely resolved.</p>
	Shooting on steel targets results in ricochets or bullet splatter, and injuries.	<p>ROs ensure steel target placement is in accordance with HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>. Steel targets are inspected by ROs prior to event. Damaged or suspect targets will not be used. Bases of target stands will be sand bagged.</p>

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		Use of non-lead, frangible ammunition reduces possibility of ricochets or bullet splatter.
D. Team Events		
<p><b>TEAM EVENT #1</b> Multi-Purpose Range</p> <p>Rifle and Handgun Event (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>• Team dons protective masks</li> <li>• Team negotiates culvert obstacle</li> <li>• Team engages color-coded steel targets from façade #1 at 50 yard line with rifle</li> <li>• Team engages steel targets from façade #2 at 25 yard line with pistol</li> <li>• Team engages steel targets from façade #3 at 15 yard line with pistol</li> </ul>	Injuries – General.	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call “CEASE FIRE” if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of <i>HSS Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #1, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>• Do not load their weapons until directed by the Team Captain.</li> <li>• Do not fire until all members are in their shooting positions.</li> <li>• Do not fire until directed by the Team Captain.</li> <li>• Unload and SAFE weapons when shooting is completed.</li> </ul>
	Team member discharges weapon prematurely at beginning of event, resulting in injury.	Prior to start of event, ROs ensure team members are at the starting line and their rifles are in a half-load configuration, on SAFE, and positioned barrel-down in a rifle rack. Their handguns are in a full load configuration, on SAFE or de-cocked, holstered, and with retention straps in place. Magazines will be fully loaded/secured.

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		Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.
	Team member experiences difficulty when competing in protective mask, resulting in injury.	<p>Team members arrive at SPOTC with the training and ability to properly inspect, clean, fit test, don and remove a protective mask during competition events.</p> <p>Team members must have satisfied medical requirements for training in protective masks found in 29 CFR 1910.134 and be a participant in their site's Respirator Program.</p> <p>RO and Team Captains will closely observe masked team members for signs of breathing difficulty or dehydration, and refer such team members to an onsite paramedic.</p> <p><b>Note 1:</b> If team members are required to wear protective masks during a competition event that requires shooting, the protective mask will serve as eye protection.</p> <p><b>Note 2:</b> Hats with brims are required when shooting steel targets. If team members are required to wear protective masks during a competition event that involves shooting, a hat will not be required.</p>
	Team member injured when negotiating culvert obstacle.	<p>ROs ensure top and sides of culvert entrance and exit is padded. Team members wear knee and elbow pads when traversing the culvert obstacle. The culvert obstacle is sandbagged to prevent movement.</p> <p>ROs ensure tripping obstacles are removed prior to competition event. Close proximity of RO ensures ability to rapidly respond to unsafe conditions.</p> <p>When traversing culvert obstacle, pistols will be in full-load configuration, on SAFE or de-cocked and holstered, with the retention straps secured. Rifles will be in rifle rack at culvert exit point, muzzle down, in a half-load configuration and on SAFE, and will be recovered by team members upon exit from culvert obstacle.</p>
	Team member is injured when weapon discharges while moving between positions.	<p>ROs inspect competition site prior to the event and remove trip hazards. ROs inspect surfaces between shooting positions to ensure a trip-free surface.</p> <p>Team members will carry rifles in load configuration as directed by ROs, on SAFE, and in an approved carry. Handguns will be holstered, in a full-load configuration, on SAFE or de-cocked, and with retention straps secured when moving between shooting positions.</p>

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		Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.
	<p>Team member injured when engaging color-coded steel targets with rifle from façade #1 at 50 yard line.</p> <p>Three-man teams engage steel targets with handguns from 25 yard line.</p>	<p>Team members are briefed to ensure weapon muzzle extends completely through façade opening prior to engaging targets. Team Captain ensures team member weapon muzzles are properly positioned prior to shooting. Team members assume approved shooting positions within designated fault lines when engaging targets from façade.</p> <p>Team members only fire when the Team Captain drops the “Go Plate” from the center position in façade #1.</p> <p>Three-man teams will engage steel targets from reduced distances.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Team Captain ensures team members fire only at targets that correspond to color-coded shooting positions.</p> <p>When shooting is completed, team members unload rifles, show CLEAR to RO, and move to next position with rifles in an approved carry position.</p>
	Team member is injured by bullet splatter or ricochet from steel targets.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured when engaging color-coded steel targets with handguns from façade #2 from 25 yard line, and façade #3 from 15 yard line.	Team Captains ensure team members are properly positioned behind façades, and within designated fault lines, prior to engaging targets. Team Captains ensure team member’s weapon muzzles are positioned so that edges of wooden façades or shooting ports are not subject to bullet strike or muzzle blast when team members engage targets.

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	Three-man teams engage targets from 17 yard line and 14 yard line, respectively.	Three-man teams will engage steel targets from reduced distances.  Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.
	Gunshot injury sustained by team member or RO when event firing is done.	When the stop plate is down, team members will cease fire, unload pistols and place them on SAFE or de-cocked, and show CLEAR to the RO.
<p><u>TEAM EVENT #2</u> Pistol Range 2</p> <p>Rifle Event Only (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>Team members are seated in a simulated helicopter</li> <li>Team members dismount from simulated helicopter and move to the shooting box</li> <li>Team members engage steel targets with rifles from cover of vehicles</li> </ul>	Injuries - General	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of <i>HSS Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #2, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>Do not load their weapons until directed by the Team Captain.</li> <li>Do not fire until all members are in their shooting positions.</li> <li>Do not fire until directed by the Team Captain.</li> <li>Unload and SAFE weapons when shooting is completed.</li> </ul>

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	Team member injured when dismounting simulated helicopter.	<p>At start of event, ROs ensure team members are seated properly with feet off the ground, with the back of their legs against the platform. The simulated helicopter is secured to the ground to preclude movement when team members mount or dismount. Rifles are in a half-load configuration, SAFE and slung. Pistols are in a full load configuration, SAFE or de-cocked, holstered, with retention straps secured. ROs have cleared the dismount area of tripping hazards.</p> <p>Team Captain will give the command to dismount and team members will drop the short distance to the ground and proceed to the shooting box.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured when weapon discharges while moving between positions.	<p>ROs inspect competition site prior to the event and removes trip hazards. ROs inspect surfaces between shooting positions to ensure a trip-free surface.</p> <p>Team members will carry rifles in load configuration as directed by ROs, on SAFE, and in an approved carry. Pistols will be in a full load configuration, on SAFE or de-cocked, holstered with retention strap secured.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	<p>Team member injured when engaging steel targets with rifle from cover vehicles.</p> <p>Three-man teams engage steel targets with handguns.</p>	<p>ROs ensure areas behind cover vehicles are free of obstacles for shooters assuming kneeling or prone positions.</p> <p>Team members are briefed on their assigned vehicle and required shooting position and shooting sequence. Team members only assume approved shooting positions behind their cover vehicles when directed by the Team Captain.</p> <p>Team Captains ensure weapon muzzles are in a safe position relative to cover vehicles prior to team members engaging targets. Team Captain ensures team member weapon muzzles are properly positioned prior to shooting. Team member firing from under a cover vehicle will keep the weapon muzzle inside the limitation box mounted under the vehicle.</p>

**NON-PROPRIETARY INFORMATION**

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Team Captain ensures team members fire only at targets that correspond to color-coded shooting positions.</p>
<p><u>TEAM EVENT #3</u> Rifle Range #1</p> <p>Handgun and Rifle Event (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>• Team member climbs Bell Tower rope</li> <li>• Four team members engage steel targets with rifle from façade</li> <li>• Four team members engage steel targets with pistols from façade</li> <li>• One team member engages Texas Star target with pistol</li> </ul>	<p>Injuries – General.</p>	<p>When the stop plate is down, team members will cease fire, unload rifles, place them on SAFE, show CLEAR to the RO and remain standing behind their vehicles until directed to depart.</p> <p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call “CEASE FIRE” if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #3, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>• Do not load their weapons until directed by the Team Captain.</li> <li>• Do not fire until all members are in their shooting positions.</li> <li>• Do not fire until directed by the Team Captain.</li> <li>• Unload and SAFE weapons when shooting is completed.</li> </ul>

**NON-PROPRIETARY INFORMATION**

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member prematurely discharges weapon, resulting in injury.	Team members begin event in a starting box at base of Bell Tower. Prior to start of the event, four team member rifles will be in a half-load configuration, on SAFE, and slung, and one rifle of the rope climber will be in a half-load configuration, on SAFE, and muzzle down in a nearby rifle rack. All pistols are in full load configuration, on SAFE or de-cocked, holstered, and with retention straps secured. Magazines will be fully loaded and secured. The rope climber's rifle will remain in the rack until the Team Captain directs that he recover the weapon.
	Team member injured when climbing rope in Bell Tower.	<p>Steel frame of Bell Tower is sturdy and free of sharp edges. ROs will ensure that:</p> <ul style="list-style-type: none"> <li>• Any protrusions on the frame are covered</li> <li>• The frame is securely anchored to the ground to prevent movement or tipping</li> <li>• The climbing rope is sturdy and securely affixed to the top of the metal support frame</li> <li>• The climbing rope is inspected between events</li> <li>• Soft earth or padding is under, and around, the support frame to reduce injury to any team member falling off the rope.</li> </ul> <p>ROs will be positioned around the frame to assure the safety of the climber. The rifle of the team member climbing the rope will be unloaded, on SAFE and muzzle down in a nearby rifle rack. The rifle will not be reclaimed by the team member until directed by the Team Captain.</p>
	Team member is injured when moving to shooting positions.	<p>ROs ensure tripping obstacles are removed from areas over which team members will move.</p> <p>Rifles will be slung or in an approved carry position during movement to shooting positions. Pistols will remain holstered during movement to shooting positions with retention straps secured.</p> <p>A wooden ramp from the concrete walk at the 200 yard line facilitates the safe movement of team members down range.</p> <p>When four team members reach the façade and assume approved shooting positions, they will not load and fire until directed by the Team Captain.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member is injured when firing rifle at steel targets (75 yards) through façade opening.	Four team members are briefed to assume approved positions prior to engaging targets, and to ensure rifle muzzles extend through façade openings prior to engaging targets. Team Captain ensures four team members are in appropriate positions and rifle muzzles are in proper position prior to directing loading of rifles and engaging color-coded steel targets in the required sequence.
	Three-man teams will engage steel targets from façade with pistols at 50 yards.	<p>Three-man teams will engage steel targets from reduced distances.</p> <p>When all targets are down, the Team Captain will direct all rifles to be unloaded, placed on SAFE and slung.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member injured when firing pistol at steel targets (15 yards) through façade opening.	Team members are briefed to assume approved positions prior to engaging targets, and to ensure pistol muzzles extend through façade openings prior to engaging targets. Team Captain ensures team members are in appropriate positions and pistol muzzles are in proper position prior to directing team members to engage color-coded steel targets.
	Three-man teams also engage steel targets from façade with pistols at 15 yards.	<p>Three-man teams will engage steel targets from the same distance.</p> <p>When all targets are down, the Team Captain will direct all pistols to be unloaded, placed on SAFE or de-cocked and holstered.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member or RO is injured from ricochet or bullet splatter from steel targets and Texas Star.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Use of color-coded to steel targets ensure targets are engaged at a correct angle, reducing the possibility of ricochets.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Gunshot injury is sustained by team member or RO when event firing is completed.	When all targets are down and the designated team member (rope climber) engages and hits the blue plate, the event is over. Team members will safe and clear their weapons and the Team Captain will verify their condition.
<p><u>TEAM EVENT #4</u> Rifle Range 2</p> <p>Rifle Event Only (Handgun for Three-man Teams)</p> <ul style="list-style-type: none"> <li>Team member breaches door with ram, team members go through door</li> <li>Team members move to facades and engage steel targets with rifles</li> <li>Team members returns to breaced door and move through door</li> </ul>	Injuries – General.	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call “CEASE FIRE” if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #4, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>Do not load their weapons until directed by the Team Captain.</li> <li>Do not fire until all members are in their shooting positions.</li> <li>Do not fire until directed by the Team Captain.</li> <li>Unload and SAFE weapons when shooting is completed.</li> </ul>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member prematurely discharges weapon, resulting in injury.	<p>At beginning of event, team members draw cards for target color codes. Team member's handguns are in a fully loaded configuration, on SAFE or de-cocked, holstered, and with retention straps secured prior to start of event. Team member's rifles are in a half-load configuration and on SAFE, slung, or in an approved carry, prior to start of event. All pistol and rifle magazines will be fully loaded and secured.</p> <p>Three-man teams will only have pistols.</p> <p>RO will closely supervise Team Captain and team member adherence to the event rules. When moving between shooting positions, team member rifles will be in a half-load configuration, on SAFE, and in an approved carry position. Pistols will be on SAFE or de-cocked and holstered, with retention straps secured.</p>
	Team member injured when breaching door, or when going through breached door.	<p>Prior to negotiating door breaching obstacle, Team Captains ensure team member rifles are in a half-load load configuration, on SAFE, and in an approved carry. Team Captains ensure pistols are holstered when moving between positions, on SAFE or de-cocked, with retention straps secured.</p> <p>Breaching façade is secured to ground so it will not move or fall when the door is struck with the 1-man ram. ROs ensure ram surfaces are smooth so breacher does not injure hands.</p> <p>Breacher drops ram in area that does not pose a tripping hazard to team members.</p> <p>ROs ensure edges of simulated doorway are smooth and free of sharp surfaces or protrusions so that team members passing through are not injured. Passage through simulated doorway is inspected by ROs prior to the event and trip hazards are removed.</p> <p>The entire team traverses the door obstacle together, accompanied by an RO.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>All team members are trained to use the ram.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member or RO injured when engaging steel targets from façade: <ul style="list-style-type: none"> <li>• Steel Plates, 100 yards</li> <li>• Steel Plates, 75 yards</li> <li>• Steel Plates, 50 yards</li> <li>• Texas Star, 40 yards</li> </ul>	RO inspects event area prior to event to ensure trip hazards are removed. Team members wear hearing and eye protection, knee and elbow pads, brimmed hats, and sturdy, non-slip footwear.  Team members are briefed to assume appropriate shooting positions prior to engaging targets and ensure weapon muzzle extends completely beyond edges of façade, or completely through façade openings, prior to engaging targets. Team Captain ensures team members fire only at targets that correspond to color-coded shooting positions.
	Three-man teams engage color-coded steel targets with pistols from reduced distances.	Three-man teams will engage steel targets from reduced distances.
	Team member is injured by fragments when weapon is fired before muzzle is completely through façade opening.	Team Captain ensures team members are in appropriate positions prior to engaging targets. RO ensures weapon muzzles are in proper position prior to shooting.  Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.
	Team member is injured when shifting shooting positions.	Team members assume approved shooting position behind the facade and engage color-coded steel targets when directed by Team Captain. When each shooter has taken down his assigned targets, he stands, safes his rifle and lets it hang, and raises his hands. When all shooters have their hands raised, the Team Captain directs them to move (left) to the next shooting position. Team members assume approved shooting position behind the facade and engage color-coded steel targets when directed by the Team Captain.
	Team member is injured when moving from extreme left position, behind line of shooters, to extreme right position.	When team member at left-most position completes firing he: <ul style="list-style-type: none"> <li>• Unloads the weapon;</li> <li>• Locks the bolt to the rear;</li> <li>• Shows CLEAR to the RO;</li> <li>• Holds magazine in hand opposite from the rifle;</li> <li>• Makes an inside turn with a depressed muzzle.</li> </ul> When the Team Captains directs the team to shift left, the shooter: <ul style="list-style-type: none"> <li>• Moves behind the line of shooters to the right-most shooting position;</li> <li>• Assumes an approved firing position behind the façade;</li> <li>• Engages color-coded steel targets.</li> </ul>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member is injured by bullet splatter or ricochet from steel targets or Texas Star.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Edges and shooting ports of wooden façades are color-coded to steel targets down range to ensure targets are engaged at a correct angle, reducing the possibility of ricochets.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member injured when firing from façades is completed and team moves back through breached door.	When firing at façades is complete, team members unload and safe and their weapons, sling them, and move back through the breached door. When the last man is through, the Team captain engages the STOP plate.
	Gunshot injury is sustained by team member or RO when event firing is completed.	When the stop plate falls, the Team Captain will safe and clear his weapons and show CLEAR to the RO.
<p><b>TEAM EVENT #5</b> R&amp;D Range</p> <p>Rifle and Handgun Event (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>Team members start from gate to R&amp;D Range and run to first position</li> <li>Two team members engage steel targets on R&amp;D Range with rifles from 100 yards</li> <li>Three team members with ram run to Live Fire Shoot House (LFSH) and breach door</li> </ul>	Injuries – General.	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
<ul style="list-style-type: none"> <li>Three team members engage steel targets with pistols from shooting ports in LFSH</li> <li>Two team members engage steel targets on R&amp;D Range with pistols from 25 yards</li> <li>Three team members remove downed officer to vehicle outside LFSH</li> </ul>		<p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #5, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>Do not load their weapons until directed by the Team Captain.</li> <li>Do not fire until all members are in their shooting positions.</li> <li>Do not fire until directed by the Team Captain.</li> <li>Unload and SAFE weapons when shooting is completed.</li> </ul>
	Team member is injured when weapon discharges prior to beginning of event.	<p>Team members begin event with the handgun in a fully loaded configuration, on SAFE or de-cocked, holstered, and with retention straps secured. Rifles will be in a half-load configuration and on SAFE, slung, or in an approved carry. Pistol and rifle magazines will be fully loaded and secured.</p> <p>ROs ensure path from event start point to first shooting position is clear of trip hazards, and route to the Live Fire Shoot House is clear of trip hazards. ROs accompany team members from start point to their positions.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member or RO is injured in route to, or during, firing rifles at steel targets.	<p>ROs ensure path to firing points is free of tripping hazards.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Three-man teams will engage steel targets with pistols at reduced distances.	<p>Three-man teams will engage steel targets from reduced distances.</p> <p>Team Captain ensures team members fire only at targets that correspond to color-coded shooting positions.</p>
	Team member or RO is injured when weapon discharges while moving to, or while at, shooting position.	<p>Once event begins, two team members firing rifles will not engage targets until they are in a designated shooting position, are facing down range and are directed to engage targets by the Team Captain.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>When moving to second shooting position at 25 yard line, two team member's rifles will be unloaded, on SAFE, and slung or pointed in a safe direction. ROs will verify condition of team member's rifle prior to movement. Pistols will be holstered, on SAFE or de-cocked, with retaining strap secured when moving.</p> <p>Team members at 25 yard line will not draw pistols and engage targets until signaled by team member at LFSH entrance.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured when running from start point to entrance of LFSH.	<p>ROs remove potential tripping hazards in areas where team members must run to reach LFSH. ROs accompany team members to LFSH.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member employing ram is injured, or team member is injured when going through door after breaching.	<p>ROs ensure path to door way and door way are free of trip obstacles. ROs ensure smooth surface of ram so that breacher does not injure hands.</p> <p>Breacher drops ram in area that does not pose a tripping hazard to team members.</p> <p>Prior to entering breached door, Team Captains ensure team member rifles are in a half-load load configuration, on SAFE, and in an approved carry. Team Captains ensure pistols are holstered when moving between positions, on SAFE or de-cocked, with retention straps secured.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>All team members are trained on the use of the ram.</p>
	<p>Team member injured when moving to, or assuming firing position within, the LFSH.</p> <p>Three-man teams in LFSH engage steel targets from shooting ports at same distance as five-man teams.</p>	<p>ROs remove trip hazards in areas of the LFSH where team members will move and assume firing positions. ROs ensure walls, door ways, hallways and shooting ports in LFSH are smooth and free of hazards.</p> <p>Team members move through LFSH to shooting ports and assume firing positions. Pistols are in a full-load configuration, holstered, on SAFE or de-cocked. Rifles are in a half-load configuration, on SAFE, and slung.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>Team Captains ensure team members assume appropriate firing positions within the fault lines, and their weapon muzzles extend beyond the opening of the firing ports. Team members engage steel targets only on command of Team Captain.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured by bullet splatter or ricochet from steel targets.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged. Team members wear approved hearing and eye protection and brimmed hats when shooting steel targets.</p>
	Team member injured when removing simulated downed officer from the LFSH.	<p>ROs remove rocks or other hazards in areas where team members must recover the simulated downed officer. ROs ensure walls, doorways and hallways in LFSH are smooth and free of hazards. ROs inspect the litter or back board used to transport the simulated downed officer to ensure it is safe and free of defects.</p> <p>At least two team members will pick up and carry the simulated downed officer to the entrance of the LFSH, accompanied by ROs. The team members will wait at the designated point at the exit from the LFSH until the last shot on the nearby range and they are given the signal to proceed. They will then transport the simulated downed officer to a nearby parked vehicle and place the downed officer inside.</p>
	Three-man teams will carry an SNM container instead of a dummy.	<p>Three-man teams will carry an SNM container to the transport vehicle while observing the two-man rule at all times.</p> <p>The vehicle will have a truck bed deep enough to safely receive the simulated downed officer and litter.</p> <p>ROs will ensure the team members carrying the simulated downed officer do not exit the LFSH until the shooters on the nearby range have assumed safe firing positions well ahead of the position of the team members carrying the simulated downed officer.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Gunshot injury is sustained by team member or RO when event firing is completed.	When the stop plate is down, firing will cease, team members will safe and clear their weapons and show CLEAR to the RO.
<p><u>TEAM EVENT #6</u> Multi-Purpose Range</p> <p>Rifle and Handgun Event (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>• Door breached with ram, team moves through door</li> <li>• Team traverses balance beams</li> <li>• Team members engage steel targets from façade #1 (100 yards)</li> <li>• Team runs to truck, pushes truck to stop point, two team members engage turning paper targets with rifles (35 yards)</li> <li>• Team runs to façade #2, engage steel targets with pistols (30 yards)</li> </ul>	Injuries – General	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call “CEASE FIRE” if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of <i>HSS Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #6, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>• Do not load their weapons until directed by the Team Captain.</li> <li>• Do not fire until all members are in their shooting positions.</li> <li>• Do not fire until directed by the Team Captain.</li> <li>• Unload and SAFE weapons when shooting is completed.</li> </ul>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member's rifle or pistol discharges while moving between shooting positions, resulting in injury.	<p>Prior to start of event, ROs ensure team member pistols are in a full-load configuration, holstered, on SAFE or de-cocked with retention strap secured. Rifles are in a half-load configuration, on SAFE, and slung or in an approved carry. Magazines are fully loaded and secured.</p> <p>Prior to moving between positions, Team Captains ensure team member rifles are in the load configuration required for the event, on SAFE, trigger fingers are straight along the frame, and proper muzzle discipline is exercised. Team Captains ensure pistols are holstered when moving between positions, on SAFE or de-cocked, with retention straps secured.</p> <p>RO inspects competition site prior to event to ensure trip hazards are removed.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member sustains injury during door breaching, or when passing through door.	<p>Prior to negotiating door breaching obstacle, Team Captains ensure team member rifles are in a half-load load configuration, on SAFE, trigger fingers are straight along the frame, and proper muzzle discipline is exercised. Team Captains ensure pistols are holstered when moving between positions, on SAFE or de-cocked, with retention straps secured.</p> <p>Breaching façade is secured to ground so it will not move or fall when the door is struck with the 1-man ram. ROs ensure ram surfaces are smooth so breacher does not injure hands.</p> <p>Breacher drops ram in area that does not pose a tripping hazard to team members. ROs ensure edges of simulated doorway are smooth and free of sharp surfaces or protrusions so that team members passing through are not injured. Passage through simulated doorway is inspected by ROs prior to the event and trip hazards are removed.</p> <p>Team members are trained to use the ram.</p> <p>The entire team traverses the door obstacle together, accompanied by an RO. Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

**NON-PROPRIETARY INFORMATION**

This RAR was prepared by the ESH&QA and Protective Force Training Departments and is scheduled for annual review in April 2010.

Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member sustains injury when negotiating balance beam obstacle.	<p>Prior to the event, RO ensures balance beams are firmly secured to the ground, or sandbagged, and will not tilt or move when team members walk on them. Balance beams are emplaced so that all team members can safely navigate the obstacle at one time.</p> <p>The entire team traverses the balance beam obstacle accompanied by an RO.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>While negotiating the balance beams obstacle, team members carry rifles in a half-load configuration, on SAFE, and in an approved carry position. Pistols will be fully loaded, on SAFE or de-cocked, holstered with retention straps secured. Team Captains ensure condition of team member's weapons prior to their mounting the balance beams.</p>
	Team member sustains minor hand, knee or elbow injury from contacting façade, or when assuming firing positions behind façade.	<p>ROs will inspect façades to ensure surfaces or edges where team members' hands may touch are smooth and free of splinters. ROs will inspect areas where team members will assume standing, sitting, kneeling or prone positions to ensure no sharp objects are present.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member injured during run from façade, around pylon, to truck.	<p>ROs inspect running path prior to event and remove potential tripping hazards.</p> <p>While running from façade to truck, team members carry rifles in a half-load configuration, on SAFE, and in an approved carry position. Pistols will be fully loaded, on SAFE or de-cocked, holstered with retention straps secured. Team Captains ensure condition of team member's weapons prior to beginning run.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured by fragments when weapon is fired before muzzle is completely beyond edges of, or through shooting ports of, façades.	<p>Team members are briefed to ensure weapon muzzle extends completely through façade openings prior to engaging targets. Team Captains ensure team member's weapons muzzles are properly positioned prior to shooting.</p> <p>Team members assume approved shooting positions within designated fault lines when engaging targets from façades.</p>

**NON-PROPRIETARY INFORMATION**

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Three-man teams will engage steel targets with handguns from reduced distances.	<p>Three-man teams will engage steel targets from reduced distances.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured by bullet splatter or ricochet from steel targets.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Shooting edges or ports of selected façades are color-coded to specific steel targets downrange so team members engage targets at correct angle, reducing possibility of ricochets.</p>
	Team member injured when pushing vehicle to firing point.	<p>Three team members will push the vehicle with a pre-positioned RO behind the steering wheel with the brake and engine off and the transmission in neutral, The two remaining team members are each located on either side of the vehicle and maintain their positions forward of the driver as the vehicle moves forward. The RO stops the vehicle after the rear wheels cross the 50-yard line. A line indicates the vehicle stop point. ROs accompany the moving vehicle.</p> <p>All three members of three-man teams will push vehicle.</p> <p>When the vehicle has come to a stop, the team members move to shooting positions in front of the vehicle at the 35-yard line.</p> <p>All team members will carry their rifles in an approved carry in a half-load configuration and on SAFE. Pistols will be fully loaded, on SAFE or de-cocked, holstered with retention straps secured. Team Captains ensure condition of team member's weapons prior to movement.</p> <p>Team Captain ensures team members are sufficiently warmed up prior to attempting to move vehicle.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	<p>Team member is injured when firing rifle from a prone position.</p> <p>Three-man teams engage targets with pistols.</p>	<p>ROs clear potential prone shooting area of rocks or sharp objects.</p> <p>Two shooting team members assume a prone position on the 25-yard line in front of the vehicle prior to engaging paper turning targets. Remaining team members stay well behind firing line while shooters engage targets.</p> <p>ROs ensure muzzles of shooting team member's rifles are properly positioned well ahead of the team member in the vehicle driver's seat.</p> <p>Once targets are down, all team members will recover to a standing position, face downrange on line, safe and clear the rifle, and show CLEAR to the RO. Team members will not move to the next position until directed by the RO.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	<p>Team member injured when firing pistol through firing ports of façade.</p>	<p>Team members are briefed to ensure weapon muzzle extends completely beyond edges of or openings in façade prior to engaging targets. Team Captains ensure team members weapon muzzles are in proper position prior to shooting.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Team members ensure good muzzle control and firm grip on pistol when assuming positions to engage targets, and that weapon barrels extend beyond the facade. Close proximity of ROs ensure ability to rapidly respond to unsafe conditions.</p>
	<p>Injury sustained by team member or RO when event firing is completed.</p>	<p>When the stop plate is down, team members will cease fire, safe and clear their weapons and the RO will verify their condition.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
<p><u>TEAM EVENT #7</u> Pistol Range 2</p> <p>Rifle and Handgun Event (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>Team members dismount from vehicle, proceed to shooting positions</li> <li>Team members engage steel targets with rifles and pistols from façade #1 (60 yards)</li> <li>Team members engage steel targets with rifles and pistols from façade #2 (57 yards)</li> <li>Team members engage steel targets with rifles and pistols from façade #3 (55 yards)</li> </ul>	<p>Injuries – General</p>	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call “CEASE FIRE” if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During Team Event #7, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>Do not load their weapons until directed by the Team Captain.</li> <li>Do not fire until all members are in their shooting positions.</li> <li>Do not fire until directed by the Team Captain.</li> <li>Unload and SAFE weapons when shooting is completed.</li> </ul>
	<p>Team member is injured when dismounting vehicle and weapon discharges.</p>	<p>Team members begin event with the handgun in a fully loaded configuration, with one round in the chamber and an empty magazine, on SAFE or de-cocked, holstered, and with retention straps secured. Rifles will be in a half-load configuration with one round in the magazine, and on SAFE, with muzzles pointed in a safe direction. Pistol and rifle magazines will be loaded with prescribed number of rounds for the event and secured in pouches.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>ROs ensure path from event start point to first shooting box is clear of trip hazards. ROs accompany team members from vehicle dismount to shooting box.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured when handgun or rifle discharges while moving to, or while within, a shooting box.	<p>ROs ensure pathway between shooting boxes is clear of trip hazards.</p> <p>Once the event begins, team members will not engage steel targets until they are in their shooting boxes, are facing down range, and the Team Captain directs them to load and fire.</p> <p>When shooting is completed from one box, the ROs ensure team member's rifles are on SAFE prior to moving to next position. Pistols will be holstered during movement, with retention straps secured, and will only be drawn and fired after reaching the designated shooting box and at the direction of the Team Captain.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured when engaging steel targets from facades.	Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i> , Section B, <i>Use of Steel Targets</i> , and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.
	Three-man teams will engage steel targets from facades with pistols only.	<p>Three-man teams will engage steel targets from facades with pistols only.</p> <p>Team members wear approved hearing and eye protection and brimmed hats when firing at steel targets.</p>
	Team member engages incorrect steel targets with weapon, and resulting ricochet causes injury.	<p>Team Captains brief team members on firing sequence, and color of target each team member is to engage. Color-coded steel targets down range ensure team members engage proper targets at a correct angle to reduce ricochets.</p> <p>For this event, steel targets will be engaged with pistols and rifles from a standing position only. Team members will not load and fire until directed by the Team Captain. During each change in firing boxes, Team members will engage their color-coded steel targets with rifles, experience a malfunction, and transition to the handgun. The Team Captain will fire at the stop plate when team members have dropped all of their targets.</p>

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		<p>When team members complete their firing from a box, they will safe their weapon and, with the muzzle pointed in a safe direction, follow the Team Captain into the next shooting box and repeat the drill.</p> <p>Three-man teams will engage steel targets from facades with pistols only.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear</p>
	Gunshot injury is sustained by team member or RO when event firing is completed.	When the stop plate is down at the final pistol shooting position, team members will cease fire, SAFE and clear their weapons, and show CLEAR to the RO.
<p><u>TEAM EVENT #8</u> Rifle Range 1</p> <p>Rifle and Handgun Event. (Handgun for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>• Team carries fire hose through façade window and places on table</li> <li>• Team moves to roof top facades and engage steel targets</li> <li>• Team fires at Texas Star with pistols</li> <li>• Team Chief engages moving target</li> </ul>	Injuries – General.	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call “CEASE FIRE” if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of <i>HSS Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>During Team Event #8, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>• Do not load their weapons until directed by the Team Captain.</li> <li>• Do not fire until all members are in their shooting positions.</li> <li>• Do not fire until directed by the Team Captain.</li> <li>• Unload and SAFE weapons when shooting is completed.</li> </ul>
	Team member prematurely discharges weapon, resulting in injury.	ROs ensures team members are at the event start point and their pistols are in a full-load configuration, on SAFE or de-cocked, holstered, and with retention straps secured prior to beginning the event. Rifles will be unloaded, on SAFE, and muzzle down in a rifle rack on the other side of the façade. Team members will not secure rifles until after they have traversed the façade and grounded the fire hose.
	Team member injured when carrying fire hose through façade window.	<p>ROs ensure tripping hazards are removed from path over which team will run to façade, and from the ground beneath the entry and exit points of the simulated window.</p> <p>ROs ensure fire hose has no sharp projections that would injure team member's hands. All team members will be required to carry the 100 lbs. hose. ROs will remind team members of proper lifting techniques prior to picking up hose.</p> <p>The hose for the three-man teams will be shorter and lighter and will require all three members to carry it. ROs will remind team members of proper lifting techniques.</p> <p>Team member rifles are unloaded, on SAFE, and in racks during the fire hose carry. Pistols will be in a full load configuration, on SAFE or de-cocked, and holstered with retention strap secured. Full rifle and pistol magazines will be secured.</p> <p>Façade will be securely anchored to the ground so that it does not tip over or move when team members are going through the simulated window. Edges around the simulated window will be free of sharp edges and obstructions and padded.</p>
	Team member is injured when moving to, and beyond, simulated roof top firing positions.	<p>ROs ensure route to firing positions is clear of tripping hazards, and that roof top facades are smooth and free of splinters and rough edges.</p> <p>Team members move to simulated roof top firing positions with unloaded rifles, on SAFE, and in an approved carry. Pistols will be holstered, on SAFE or de-cocked, with retaining strap secured when moving. Team members assume approved firing positions with rifle barrels extended beyond the edge of the simulated roof top.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>Team members will not charge rifles and engage targets until directed by the Team Captain.</p> <p>A wooden ramp from the concrete walk at the 200 yard line facilitates the safe movement of team members down range from that point.</p> <p>When each shooter has taken down his assigned targets, the Team Captain will have the shooters recover, unload, safe, clear, and sling their rifles.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member engages steel targets from simulated roof top positions or the façade out of sequence, resulting in injury.	Team Captains ensure team members understand the color-coded sequential shooting required by the event, and only engage targets in the appropriate shooter sequence. Team Captains and ROs will carefully monitor the shooting sequence of team members during the event.
	Team member is injured when climbing over pitched roof obstacle.	<p>ROs ensure approach to pitched roof obstacle is free of tripping hazards. A wooden ramp from the concrete walk at the 200 yard line facilitates the safe movement of team members down range from that point.</p> <p>ROs ensure the pitched roof obstacle is smooth and free of splinters and rough edges, and the top is protected so that team member hands are not injured. ROs require team members to place their feet on each step as they mount and descend the pitched roof obstacle.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member is injured by bullet splatter or ricochet from steel targets and the Texas Star.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Shooting ports of wooden façade are color-coded to steel targets down range to ensure targets are engaged at a correct angle, reducing the possibility of ricochets.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member injured when Team Captain engages the moving target.	<p>ROs ensure moving target is well within the range limit poles at all time so that bullets impact in the approved Surface Danger Zone.</p> <p>Team Captain will only load rifle when team members have cleared their steel targets and the Team Captain's target begins to move.</p> <p>Clay pigeon on cardboard background of moving target reduces possibility of bullet splatter or ricochet.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Gunshot injury is sustained by team member or RO when event firing is completed.	When the stop plate falls, team members will safe and clear their pistols and show CLEAR to the RO.
<p><u>TEAM EVENT #9</u> Rifle Range 2</p> <p>Rifle, Handgun, Machinegun Event (Handgun and Machinegun Event for Three-Man Teams)</p> <ul style="list-style-type: none"> <li>• Team climbs fence</li> <li>• Two team members negotiate culvert</li> <li>• Two team members negotiate Cooper Tunnel</li> <li>• Two team members climb fence obstacle</li> <li>• Two team members engage steel targets with rifles</li> <li>• Two team members engage steel targets with pistols</li> <li>• Team Captain engages steel targets with M-240 MG</li> <li>• Four team members drag dummy to Tactical Training Tower</li> </ul>	Injuries - General	<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions. Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
		<p>During Team Event #9, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>• Do not load their weapons until directed by the Team Captain.</li> <li>• Do not fire until all members are in their shooting positions.</li> <li>• Do not fire until directed by the Team Captain.</li> <li>• Unload and SAFE weapons when shooting is completed.</li> </ul>
	Team member injured when climbing Rifle Range 2 chain link fence.	<p>Team members begin event without rifles. Rifle are pre-positioned in rifle racks near the firing line and in a half-load configuration. Pistols are holstered and in a full load configuration, on SAFE or decocked, with retention straps secured. Magazines are fully loaded and secured.</p> <p>Prior to start, team members assemble outside the fence. The top of the chain link fence is smooth, padded and without sharp edges. Landing area is soft and free of obstacles.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear. Gloves are optional.</p>
	Team member injured when negotiating culvert.	<p>ROs ensure top and sides of culvert entrance and exit is padded. Team members wear knee and elbow pads when traversing the culvert. Culvert is sandbagged to prevent movement.</p> <p>ROs ensure tripping obstacles are removed prior to competition event. Close proximity of RO ensures ability to rapidly respond to unsafe conditions.</p> <p>When traversing culvert, pistols will be in full-load configuration, on SAFE or de-cocked and holstered, with the retention straps secured. Rifles will be in rifle rack near the firing line, muzzle down, in a half-load configuration and on SAFE, and will be recovered by team members prior to assuming firing positions.</p>
	Team member injured when negotiating Cooper Tunnel.	<p>ROs ensure Cooper Tunnel is free of rocks or other sharp objects. Team members wear knee and elbow pads when traversing the Cooper Tunnel.</p> <p>When traversing the Cooper Tunnel, pistols will be in full-load configuration, on SAFE or de-cocked and holstered, with the retention straps secured. Rifles will be in rifle rack near the firing line, muzzle down, in a half-load configuration and on SAFE, and will be recovered by team members prior to assuming firing positions.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team member injured when climbing chain link fence obstacle.	<p>Team members climb chain link fence obstacle without rifles. Rifle are pre-positioned in a rifle rack near the obstacle. Pistols are holstered and in a full load configuration, on SAFE or decocked, with retention straps secured. Magazines are fully loaded and secured.</p> <p>The top of the chain link fence is smooth and without sharp edges. Landing area is soft and free of obstacles.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear. Gloves are mandatory for the chain link fence obstacle.</p>
	Team member discharges weapon prematurely when retrieving it from rifle rack, resulting in injury.	<p>Rifles will be in a half-load configuration, on SAFE, and pre-positioned muzzle down in rifle racks by ROs.</p> <p>Team members retrieve rifles from racks, keeping the muzzles pointed in a safe direction when proceeding to their shooting positions.</p>
	Team member is injured by bullet splatter or ricochet from steel targets.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member or RO injured when weapon discharges while moving to façade.	<p>ROs ensure running path to façades are free of tripping hazards.</p> <p>Rifles are in a half-load configuration, on SAFE, and slung, or in an approved carry, when moving to façades. Pistols are holstered and in a full load configuration, on SAFE or decocked, with retention straps secured. Team Captain verifies condition of team member weapons prior to their movement to and from facades.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Team members will fire only when in an approved firing position and when directed by the Team Captain.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Team Captain injured when moving to M-240 MG position, or when engaging steel targets.	<p>ROs ensure running path to M-240 firing position is free of tripping hazards.</p> <p>Team Captain wears approved hearing and eye protection, brimmed hat, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Team Captain moves to pre-positioned M-240 MG on mount behind armored firing position. M-240 MG is in a half-load configuration with a pre-loaded 50-round belt of 7.62mm ammunition.</p>
	<p>Team member injured when engaging steel targets from façades:</p> <ul style="list-style-type: none"> <li>• Steel Plates, 100 yards</li> <li>• Steel Plates, 75 yards</li> <li>• Steel Plates, 50 yards</li> <li>• Texas Star, 40 yards</li> </ul>	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>ROs remove stones and sharp objects from firing positions behind each façade,</p> <p>ROs closely control movement of team members to their façades, and then ensure that team members assume approved firing positions. Team members have one rifle and one pistol firing from each façade. Team members do not load or fire until directed to do so by the Team Captain.</p> <p>Team members engage only color-coded steel targets to ensure bullets stay within approved Surface Danger Zones.</p>
	Three-man teams will engage steel targets with pistols from facades at reduced distances.	<p>Three-man teams will engage steel targets from reduced distances.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>
	Team member injured when carrying 180-lbs. dummy into Tactical Training Tower.	<p>ROs ensure path into Tactical Training Tower is free of tripping hazards. Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>Four team members must lift and carry the dummy, no single individual will attempt to carry or drag the entire 180 lbs. The dummy is placed on the ground floor inside the door to the Tactical Training Tower.</p>

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Activity/Situation/Condition	Hazard Description	Recommended Control
	Three-man teams will carry a simulated SNM canister instead of a dummy.	Three-man teams will carry a simulated SNM canister instead of a dummy. The two-man rule will be in effect for the canister.
	Reduced ambient light or darkness in the Tactical Training Tower results in injury.	Competition event is conducted during daytime with doors and firing ports open, permitting ambient light to enter. Tactical Training Tower has an internal lighting system in the event that ambient lighting is insufficient.
	Reduced air flow and high temperatures result in heat injuries.	Doors and firing ports in the Tactical Training Tower will be opened during competition event to ensure adequate ventilation and lower ambient temperatures. RO's will immediately refer any suspected heat-related injuries to the paramedic for evaluation and treatment.
	Team member is injured when proceeding to the third level of the Tactical Training Tower.	<p>ROs ensure stairs of the Tactical Training Tower are free of tripping hazards. Team members are briefed to hold on to hand rails all the way up and down the stairs, and to hit each step. An RO accompanies the team member up and down the stairs. Team members wear sturdy, non-slip footwear.</p> <p>When the dummy is on the ground floor of the Tactical Training Tower, a team member goes to the open port on the third level and signals the Team Captain. The Team Captain then engages the stop plate.</p> <p>For three-man teams, when the SNM canister is inside the tower, a team member goes to the third level and signals the Team Captain.</p>
	Gunshot injury is sustained by team member or RO when event firing is completed.	When the stop plate is down, team members will cease fire, safe and clear their weapons and show CLEAR to the RO.

**NON-PROPRIETARY INFORMATION**

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Activity/Situation/Condition	Hazard Description	Recommended Control
<p><u><b>SUPER TEAM EVENT</b></u> Rifle Ranges 1 and 2 and Pistol Range 2</p> <p>Handgun and Rifle Event (No Three-Man Super Team Event)</p> <ul style="list-style-type: none"> <li>Team exits LFR Maintenance Shop, two members proceed to Pistol Range 2, two members to Rifle Range 1, Team Captain goes to Rifle Range 2 Tactical Training Tower</li> <li><u><b>Pistol Range 2:</b></u> <ul style="list-style-type: none"> <li>Team members don masks, proceed to west side automobile, engage steel targets with rifle</li> <li>Team members proceed to east side automobile, engage steel targets with pistols</li> <li>Team members retrieve SNM canister from target automobile, proceed to Rifle Range 1</li> </ul> </li> <li><u><b>Rifle Range 1:</b></u> <ul style="list-style-type: none"> <li>Team members proceed to rooftop facades, engage steel targets with rifles</li> <li>Team members negotiate obstacle, move to next facades and engage steel targets with pistols</li> <li>Team members recover SNM canister from target vehicle, exit Rifle Range 1</li> </ul> </li> </ul>		<p>Pre-event briefing advises team members of event sequence, potential event hazards, condition of firearms, heat-related hazards, and PPE requirements for safe completion of the course.</p> <p>Paramedics are on site during competition events.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p> <p>NTC requires competing sites to only send team members who are physically and medically qualified to undergo the rigors of competition events.</p> <p>Team Captains will ensure all of their team members are sufficiently warmed up prior to competition events.</p> <p>Close proximity of RO to team members provides ability to quickly respond to unsafe conditions.</p> <p>Any SPOTC participant will call "CEASE FIRE" if they observe an unsafe condition.</p> <p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>During the Super Team Event, the Team Captain ensures the team members:</p> <ul style="list-style-type: none"> <li>Do not load their weapons until directed by the Team Captain.</li> <li>Do not fire until all members are in their shooting positions.</li> <li>Do not fire until directed by the Team Captain.</li> <li>Unload and SAFE weapons when shooting is completed.</li> </ul>

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<ul style="list-style-type: none"> <li>• <u>Rifle Range 2:</u> <ul style="list-style-type: none"> <li>- Team members from Pistol Range 2 and Rifle Range 1 meet and proceed to Rifle Range 2</li> <li>- Team members meet Team Captain at Tactical Training Tower, engage steel targets with rifles</li> <li>- Team members enter Tactical Training Tower and engage steel targets with rifles from Levels 2 and 3 firing ports</li> <li>- Team members proceed to 5<sup>th</sup> Level and leave SNM container in red box</li> <li>- Team members exit tower and negotiate obstacle course</li> <li>- Team members proceed up west service road and engage steel targets with pistols or rifles</li> </ul> </li> </ul>	Team member prematurely discharges weapon, causing injury.	<p>Prior to start of the event, RO ensures team member pistols are in a full load configuration, on SAFE or de-cocked and holstered, with retention straps secured.</p> <p>Rifles will be in a half-load configuration and on SAFE. Pistol and rifle magazines are fully loaded and secured.</p>
	Team member experiences difficulty when competing in protective mask, resulting in injury.	<p>Team members arrive at SPOTC with the training and ability to properly inspect, clean, fit test, and remove a protective mask during competition events.</p> <p>Team members also have satisfied medical requirements for training in protective masks found in 29 CFR 1910.134.</p> <p>ROs and Team Captains will closely observe masked team members for signs of breathing difficulty or dehydration, and refer such team members to an onsite paramedic.</p>
	Team members injured when engaging steel targets with rifles from cover vehicle on Pistol Range 2.	<p>ROs ensure area over which team members move to firing positions is clear of tripping obstacles. Proximity of ROs during team movement permits rapid response to an unsafe condition. ROs ensure safe condition of weapons during team member movement.</p> <p>Team Captains direct team members to engage color-coded steel targets from cover vehicle while ROs ensure muzzles of rifles extend safely beyond vehicle, and all firing stays within range limitation poles.</p>
	Team member or RO injured when weapon discharges during movement between vehicles on Pistol Range 2.	ROs ensure area over which team members move to firing positions is clear of tripping obstacles. Team Captain ensures team member rifles are safe and clear prior to movement.
	Team members injured by ricochet or bullet splatter from steel targets.	<p>Placement of steel targets will be in accordance with steel target requirements of HSS <i>Protective Force Firearms Qualification Courses</i>, Section B, <i>Use of Steel Targets</i>, and PFT-SOP-644. Use of non-lead, frangible ammunition reduces possibility of bullet splatter or ricochet. Bases of metal target stands are sandbagged.</p> <p>Team members wear approved hearing and eye protection, brimmed hats, knee and elbow pads, and sturdy, non-slip footwear.</p>

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		Shooters are directed to engage color-coded steel targets down range from designated shooting positions to ensure targets are engaged at a correct angle, reducing the possibility of ricochets.
	Team members injured when moving simulated SNM canister on Pistol Range 2.	ROs ensure areas over which team members move when recovering the simulated SNM is clear of tripping obstacles. Proximity of ROs during team movement permits rapid response to an unsafe condition.  The two man rule will be in effect when team members are carrying the simulated SNM container.  Team captains ensure safe condition of weapons during team member movement with simulated SNM canister.
	Team members injured when moving to roof façades and engaging steel targets with rifles on Rifle Range 1.	ROs ensure areas over which team members travel when moving to roof facades is clear of tripping obstacles. Proximity of ROs during team movement permits rapid response to an unsafe condition  Team captains ensure safe condition of weapons during team member movement to roof facades, and that team members assume safe firing positions behind facades. Team Captains ensure weapon muzzles extend safely beyond facades prior to directing team members to engage color-coded steel targets.
	Team member injured when moving to facade and engaging steel targets with pistols on Rifle Range 1.	ROs ensure areas over which team members move to second set of facades are clear of tripping hazards.  A wooden ramp from the concrete walk at the 200 yard line facilitates the safe movement of team members down range.  ROs ensure proper firing positions of team members behind facade, with barrels extending safely beyond the façade.  When targets are down, pistols will be holstered, on SAFE or de-cocked, with retention strap secured prior to movement to retrieve simulated SNM canister.
	Team member injured when securing simulated SNM canister and moving from Rifle Range 1.	ROs ensure areas over which team members move when recovering the simulated SNM is clear of tripping obstacles. Proximity of ROs during team movement permits rapid response to an unsafe condition.

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		<p>The two man rule will be in effect when team members are carrying the simulated SNM container.</p> <p>Team captains ensure safe condition of weapons during team member movement with simulated SNM canister.</p>
	Team member or RO injured when rifle discharges while moving to, or from, firing positions in the Tactical Training Tower.	<p>Rifles are unloaded, on SAFE, and slung, or in an approved carry, when moving in the Tactical Training Tower. RO verifies condition of team member's weapons prior to movement to the tower. Team Captain ensures safe condition of team member's weapons during movement inside the tower</p> <p>Team members are escorted to firing positions by RO and will use hand rails when moving up or down stairs. Team members will touch every stair when going up and down stairs in the tower.</p> <p>Team member will only load rifles at Team Captain direction, and only when in an approved firing position at the shooting port.</p>
	Observer in bleachers on Rifle Range 2 is injured when team members fire from tower shooting ports	Bleachers to west of Tactical Training Tower are moved south so they are not even with, or beyond, the tower firing ports.
	Team member or RO injured when steel targets are being engaged from shooting positions in the Tactical Training Tower.	<p>RO closely controls movement of the team member to shooting positions in the Tactical Training Tower, and then ensures that the team member assumes an approved firing position. Team member does not load or fire until directed to do so by the Team Captain.</p> <p>The shooting position is equipped with a shooting box to limit the movement of the team member's weapon barrel. Team member wears required PPE when shooting from the Tactical Training Tower.</p> <p>When targets are down, the team member rifle will be unloaded and placed on SAFE, and the team member will remain in place until directed to move by the Team Captain.</p>
	Team member injured when departing Tactical Training Tower and negotiating obstacle course.	RO inspects obstacle course route prior to event and removes potential trip hazards. RO briefs team members on obstacle course route. Team members carry unloaded rifles, on SAFE, with muzzles pointed in a safe direction when negotiating obstacles.

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		<p>Pistols are holstered, on SAFE or de-cocked, with retention straps secured.</p> <p>The three Overhead Obstacles are secured to ground so they will not fall on team members when they pass under them, and the edges of the tops of the obstacles are smooth and free of splinters.</p> <p>The two Cooper Tunnel Obstacles are secured to the ground so they do not move when team members are going over them, and have their three plastic pipes secured to the frames so that they do not move when team members are traversing them.</p>
	Team member injured when moving up the west-side service road to firing positions and engaging steel targets.	<p>ROs inspect route to firing positions prior to event and remove potential trip hazards. ROs accompany team members on routes to firing positions. Team members carry unloaded rifles, on SAFE, with muzzles pointed in a safe direction. Pistols are holstered, on SAFE or de-cocked, with retention straps secured.</p> <p>When team members reach firing positions, the Team Captain directs the first team member to load weapon and engage his assigned row of color-coded steel targets with a pistol or rifle. When the first row is down, the Team Captain drops the Stop Plate and the next team member engages his assigned row of targets.</p> <p>After each shooter, the Team Captain drops a Stop Plate until all team members have fired. Then the firing is completed, the Team Captain calls Cease Fire. ROs inspect team member weapons and verify that they are unloaded and safe.</p>

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